

WHAT IS CLAIMED IS:

1. A light emitting element driving circuit for supplying driving current to a light emitting element connected to one line of a current mirror circuit having two parallel lines, comprising:

5 a pulse generating circuit connected to the other line so that pulse current flows through the other pulse; and

10 superposing first auxiliary pulse current on the pulse current in synchronization with the rise-up time of the pulse current.

2. The light emitting element driving circuit according to Claim 1,

15 wherein the pulse generating circuit generates a pulse voltage for controlling a switch connected to the other line in series.

3. The light emitting element driving circuit according to Claim 2,

20 wherein the superposing mean comprises a differentiation circuit for differentiating a pulse voltage output from the pulse generating circuit and inputting the pulse voltage thus differentiated to the other line, and

25 wherein the first auxiliary pulse current is generated in accordance with the output of the differentiation circuit.

4. The light emitting element driving circuit according to Claim 1,

wherein the downstream side of the other line is connected to a current source for defining current flowing through the concerned line.

5 5. The light emitting element driving circuit according to Claim 2,

wherein the superposing means comprises a one-shot circuit for outputting one shot pulse voltage in synchronization with the rise-up time of the pulse voltage, and a transistor which has a control terminal supplied with the shot pulse voltage and is connected to the downstream side of the other line.

10 6. The light emitting element driving circuit according to Claim 2,

wherein the downstream side of the other line is branched, one of the branched lines is connected to a first transistor for defining current flowing through the concerned line,

15 the superposing means comprises a one-shot circuit for outputting a one shot pulse voltage in synchronization with the rise-up time of the pulse voltage,

20 and a second transistor which has a control terminal supplied with the shot pulse voltage and is connected to the downstream side of the other line of

the branched lines,

a third transistor for defining current flowing through the second transistor is connected to the downstream side of the second transistor,

5 and the control terminals of the first and third transistors are mutually connected to each other.

7. The light emitting element driving circuit according to Claim 1,

10 wherein the superposing means superposes negative second auxiliary pulse current on the pulse current in synchronization with the falling time of the pulse current.

8. The light emitting element driving circuit according to Claim 1,

15 wherein a source follower circuit is connected to one line of the current mirror circuit.

20 9. A light emitting element driving circuit for supplying driving current to a light emitting element connected to one line of a current mirror circuit having two parallel lines, comprising a pulse generating circuit connected to the other line so that pulse current flows,

25 and superposing means for superposing the pulse current on auxiliary pulse current in synchronization with the falling time of the pulse current.

10. The light emitting element driving circuit

according to Claim 1 or 9, further comprising:

a source follower circuit connected to the one line of the current mirror circuit, and

5 a current setting circuit for setting current so that the current flowing through the source follower circuit is substantially proportional to current flowing through the other line of the current mirror circuit.

10 11. The light emitting element driving circuit according to Claim 10,

wherein the current setting circuit has a current controlling transistor equipped to the other line of the current mirror circuit, and the transistor and the source follower circuit are connected to each other so 15 that the current source for supplying current to the source follower circuit is controlled by an input to the control terminal of the transistor.